FUTURE FISHERIES IMPROVEMENT PROGRAM
GRANT APPLICATION
(please fill in the highlighted areas)

I. APPLICANT INFORMATION

A. Applicant Name: Montana Fish, Wildlife & Parks

B. Mailing Address: 4600 Giant Springs Rd.

C. City: Great Falls State: MT Zip: 59405

Telephone: 406-791-7775

D. Contact Person: David Moser, Montana Fish, Wildlife & Parks

Address if different from Applicant:

City: State: Zip:

Telephone:

E. Landowner and/or Lessee Name (if other than Applicant): United States Forest Service

Mailing Address: 4234 US Highway 89 North

City: Neihart State: MT Zip: 59465

Telephone: 406-236-5100

II. PROJECT INFORMATION*

A. Project Name: Barker-Hughesville Reclamation Area Fish Barrier

River, stream, or lake: Dry Fork Belt Creek

Location: Township 15N Range 10E Section 2

County: Cascade

B. Purpose of Project:

Westslope cutthroat trout restoration

C. Brief Project Description:

The Dry Fork of Belt Creek has a long history of mining. The Block P and other mines produced lead silver ores from prior to the 1800's until the 1940's resulting in accumulated mine waste placement adjacent to the Dry Fork of Belt Creek and Galena Creek. The Environmental Protection Agency (EPA) listed the Dry Fork Belt Creek area as a federal Superfund site in 2000 due to the threat of metals contamination to humans and the environment. The mining effects rendered segments of the Dry Fork and its tributaries uninhabitable for fish and most other aquatic species. EPA and the Forest Service have negotiated and reached agreement with responsible parties (PRPs) to conduct cleanups in this drainage which has resulted in two major removal efforts, one still ongoing: these efforts may potentiate movement of non-native rainbow trout and brook trout into natal WCT habitat.

In the absence of barriers to upstream movement of non-native fishes, WCT typically either become hybridized with rainbow trout or are displaced by brook trout. Non-hybridized WCT currently occupy less than 4% of historically occupied habitat in northcentral Montana (Moser, 2010). In addition, hybridized populations of WCT (< 10% hybridization) occupy approximately 6% of historically occupied habitat of this area (Moser, 2010). Existing non-hybridized populations are relegated to small sections of headwater streams and are protected from non-native fishes by waterfalls or man-made barriers.

To mitigate for the potential decrease in genetic purity and total numbers of WCT, we propose construction of a fish barrier and removal of non-native fishes upstream of the fish barrier. The proposed barrier location – approximately two miles upstream of the mouth of Dry Fork Creek - was based upon site characteristics; primarily channel incisement, access for construction equipment, and stream gradient (Figure 2,3, and 4). The Dry Fork of Belt Creek currently supports five tributary populations of WCT greater than 99% genetic purity. The mainstem Dry Fork supports primarily non-native brook trout. Other species present in lower numbers in the Dry Fork include: rainbow trout, hybridized WCT, and long nosed dace. Construction of a fish barrier near the mouth of the Dry Fork; combined with removal of existing non-native fishes in the mainstem and a few tributaries, will address the difficult goal of maintaining a large metapopulations of WCT that exhibit multiple life histories.

Project Update

Since the original grant request submitted in 2012, several issues have necessitated an additional request for project funds. First, bids (2) for construction of the fish barrier received in early 2014 were much higher than the design engineers original cost opinion. The original cost opinion for the fish barrier was in the amount of $83,738. This cost estimate was based on the size of the structure, ease of access and the lack of need for water management – Dry Fork Belt Creek is nearly always dry at the location site during the construction season. We are unsure why bids came in high; speculatively, increasing demand for construction services due to an improving economy and natural resource extraction could have been issues. We plan on submitting an RFP in the late winter of 2015 in an attempt to find contractors earlier than last year. A second issue that arose in 2014 was unpredicted significant precipitation in August – this abnormally high precipitation event raised water tables and resulted in summer long stream flow at the project site. Dry Fork Belt Creek may well be dry next year during construction but we must plan for dewatering costs nonetheless. Dewatering costs are typically between $25,000 and $35,000 for these types of instream construction projects. We had obtained $120,000 for construction previously. The lowest bid submitted last spring was $174,250. Thus, we were $64,000 short (not including de-watering). If we add $35,000 in de-watering costs the total project cost shortfall is $100,000. We plan on requesting the remainder - $60,000 from the Northwestern Energy - Missouri River Technical Committee Dec 1st 2014.

D. Length of stream or size of lake that will be treated: 26

E. Project Budget:

Grant Request (Dollars): $ $40,000

Contribution by Applicant (Dollars): $ N/A In-kind $
(salaries of government employees are not considered as matching contributions)

Contribution from other Sources (Dollars): $ $212,200 In-kind $
(attach verification - See page 2 budget template)

Total Project Cost: $ $252,200

F. Attach itemized (line item) budget – see template

G. Attach specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support, and/or other information necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete supplemental questionnaire (fwp.mt.gov/habitat/futurefisheries/supplement2.doc).

H. Attach land management and maintenance plans that will ensure protection of the reclaimed area.

III. PROJECT BENEFITS*

A. What species of fish will benefit from this project?:

Westslope cutthroat trout *(Oncorhynchus clarkii lewisi)*

B. How will the project protect or enhance wild fish habitat?:

- Prevent upstream movement of non-native fishes through construction of a fish barrier approximately 2 miles upstream of the confluence of Belt Creek and Dry Fork Belt Creek (completed by 2015).
- Eliminate competition and hybridization from non-native fishes through removal of non-native fishes from approximately 20 miles of Dry Fork Creek and Oti Park Creek (completed by 2018).
- Expand WCT downstream from headwater areas through collection, fertilization, and transfer of eggs to lower elevation reaches. This will increase the potential miles of stream available for WCT from the current 6 miles to 26 miles. (completed by 2021).

C. Will the project improve fish populations and/or fishing? To what extent?:

The impetus for this project was mine remediation activities in the headwaters of Dry Fork Belt Creek. Cleanup of mine waste should, over time, improve fish populations and consequently fishing opportunities in the Dry Fork.

D. Will the project increase public fishing opportunity for wild fish and, if so, how?:

The Cutthroat trout is the State fish of Montana. The WCT is the only trout native to the Missouri River drainage. WCT are part of the history and legacy of Montana. Westslope cutthroat trout were first described by Lewis and Clark in 1805 near Great Falls, Montana. Currently, state fishing regulations are catch and release only for WCT in streams and rivers. If this project were implemented, WCT populations in the Dry Fork would likely reach densities high enough to allow limited harvest by the public. This project would directly benefit the public by expanding the native populations of WCT downstream to more highly fished areas; while still allowing a limited harvest for human consumption.

E. If the project requires maintenance, what is your time commitment to this project?:

Montana Fish, Wildlife & Parks is committed to protecting native westslope cutthroat trout over the long term. Previous maintenance issues with constructed fish barriers have been addressed rapidly. Our commitment to maintenance of the fish barrier and the associated metapopulation of westslope cutthroat trout is a priority.

F. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?:

Habitat degradation in the project area was caused by long term mining activities in the basin. Current mine cleanup activities (see project description section) should address habitat limitations. This project will address impacts to native populations of westslope cutthroat trout from previous stocking of non-native fishes and continued upstream movement of non-native fishes from Belt Creek.

G. What public benefits will be realized from this project?:

This project will ensure that westslope cutthroat trout, Montana's state fish and the only trout native to the Dry Fork of Belt Creek drainage, is preserved over the short and long term by providing for expansion of its habitat. Current mine remediation activities, if successful, will create conditions amenable to the survival and reproduction of trout species. Much of the current Dry Fork Belt Creek drainage - primarily mainstem and lower reaches of tributaries – is currently occupied by non-native brook trout and rainbow trout. These large sources will be the primary source for recolonization of fishless reaches. The lower reaches of Gold Run Creek support a genetically pure population of WCT. In the event Galena Creek is restored by reclamation, Lower Gold Run Creek WCT would be directly threatened by invasion of brook trout and rainbow trout. Upper Dry Fork Belt Creek, including Oti Park Creek are currently slightly hybridized and in competition with brook trout. If Galena Creek and mainstem Dry Fork Belt Creek habitat quality improves significantly the current rate of invasion and subsequent hybridization and competition may increase in upper portion of the Dry Fork of Belt Creek.

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Projects which restore WCT to historical habitats are crucial to preventing future listing of WCT under the Endangered Species Act. If WCT were to ever be listed as threatened or endangered there is a potential for increased federal regulatory restrictions on land use.

With the increase in available habitat for WCT in a popular public recreation area, this project will provide an indirect benefit to recreationists who enjoy fishing for a native species.

(References available upon request)

H. Will the project interfere with water or property rights of adjacent landowners? (explain):

No

I. Will the project result in the development of commercial recreational use on the site?: (explain):

No

J. Is this project associated with the reclamation of past mining activity?:

Yes

Each approved project sponsor must enter into a written agreement with the Department specifying terms and duration of the project.

IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature: _____ Date: 11/25/14

Sponsor (if applicable): _____

***Highlighted boxes will automatically expand.**

Mail To:
Montana Fish, Wildlife & Parks
Habitat Protection Bureau
PO Box 200701
Helena, MT 59620-0701

Incomplete or late applications will be returned to applicant.

Applications may be rejected if this form is modified.

*****Applications may be submitted at anytime, but must be received by the Future Fisheries Program office in Helena before December 1 and June 1 of each year to be considered for the subsequent funding period.*****

Design Summary

A cast in place concrete weir fish barrier will meet the minimum criteria of blocking fish up to the 50 year event and could be designed to prevent upstream movement of fish at flows greater than the 50 year (Figures 3 and 4). Similar structures which incorporate a notch, wing walls and a sloped apron have been constructed in other areas of northcentral Montana.

Revised Budget

Estimated Costs:

Category	RDGP	EPA	PPL Mont.	Future Fisheries	Total
Personnel Cost (Barrier Construction Oversight)					
Personnel Cost (Non-Native Fish Removal and Rest.)					
Contracted Services (Barrier Construction)	$110,000*****		$60,000***	$50,000****	$220,000
Activity: Design and Engineering - Contracted Service		$18,200*	$14,000**		$32,200
TOTAL CASH	$110,000	$18,200	$74,000	$50,000	$252,200

*US EPA has committed $18,200 of Asarco LLC settlement cleanup funds for survey, design and bid package development for the fish barrier. This award and work is 90% complete
**PPL previously awarded $14,000 for construction oversight of the fish barrier
***We are requesting an additional $60,000 from Northwestern energy MoTAC to cover a shortfall for construction services based on bids submitted in 2014
****$10,000 was awarded previously by the FFIP
*****Funds awarded by the Resource Development Grant Program (DNRC) have been carried over to 2015.

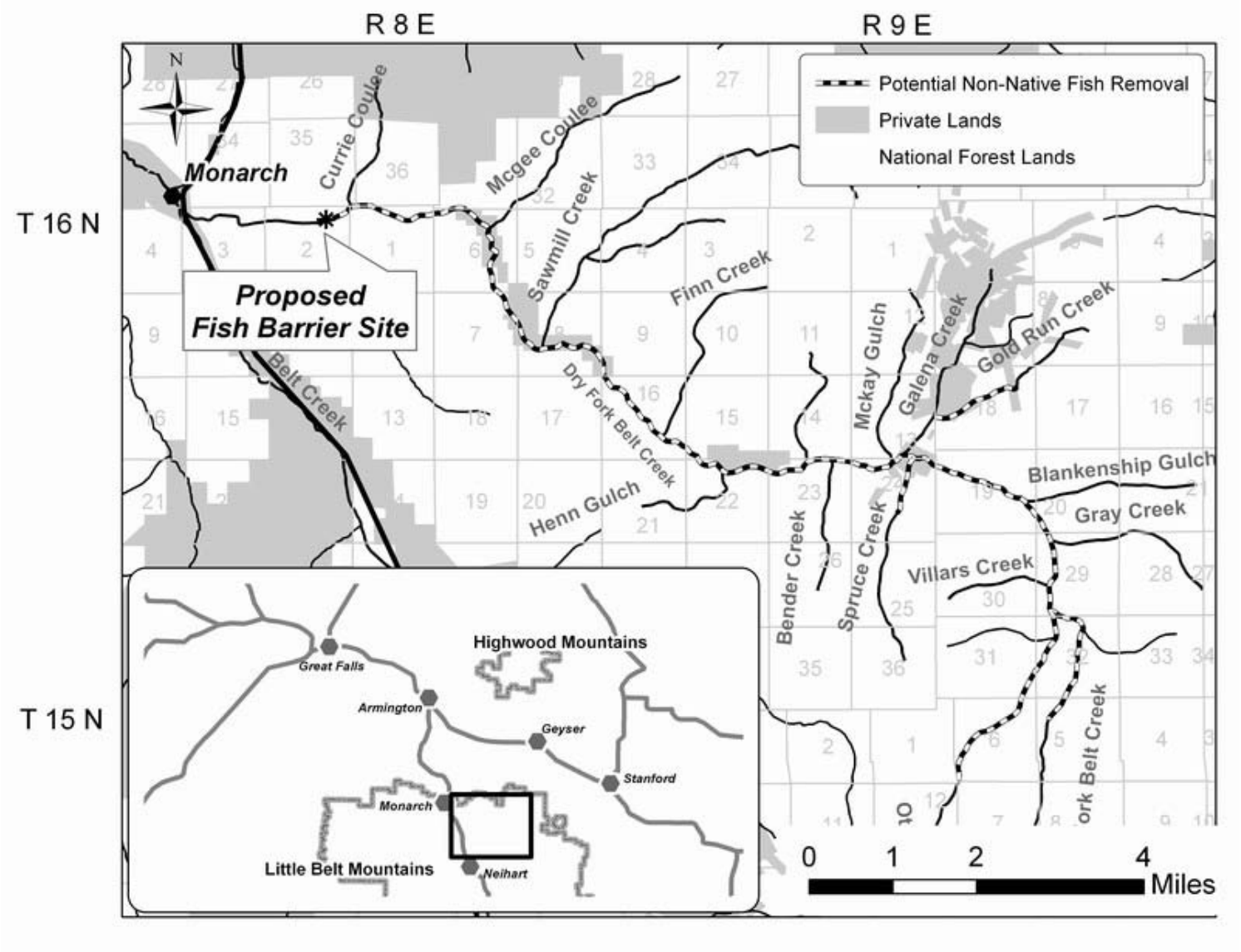

Figure 1. Site location of proposed fish barrier.

Figure 2. Barrier site, looking downstream.

Figure 3. Barrier site showing surveying and barrier configuration in relation to national forest and county road.

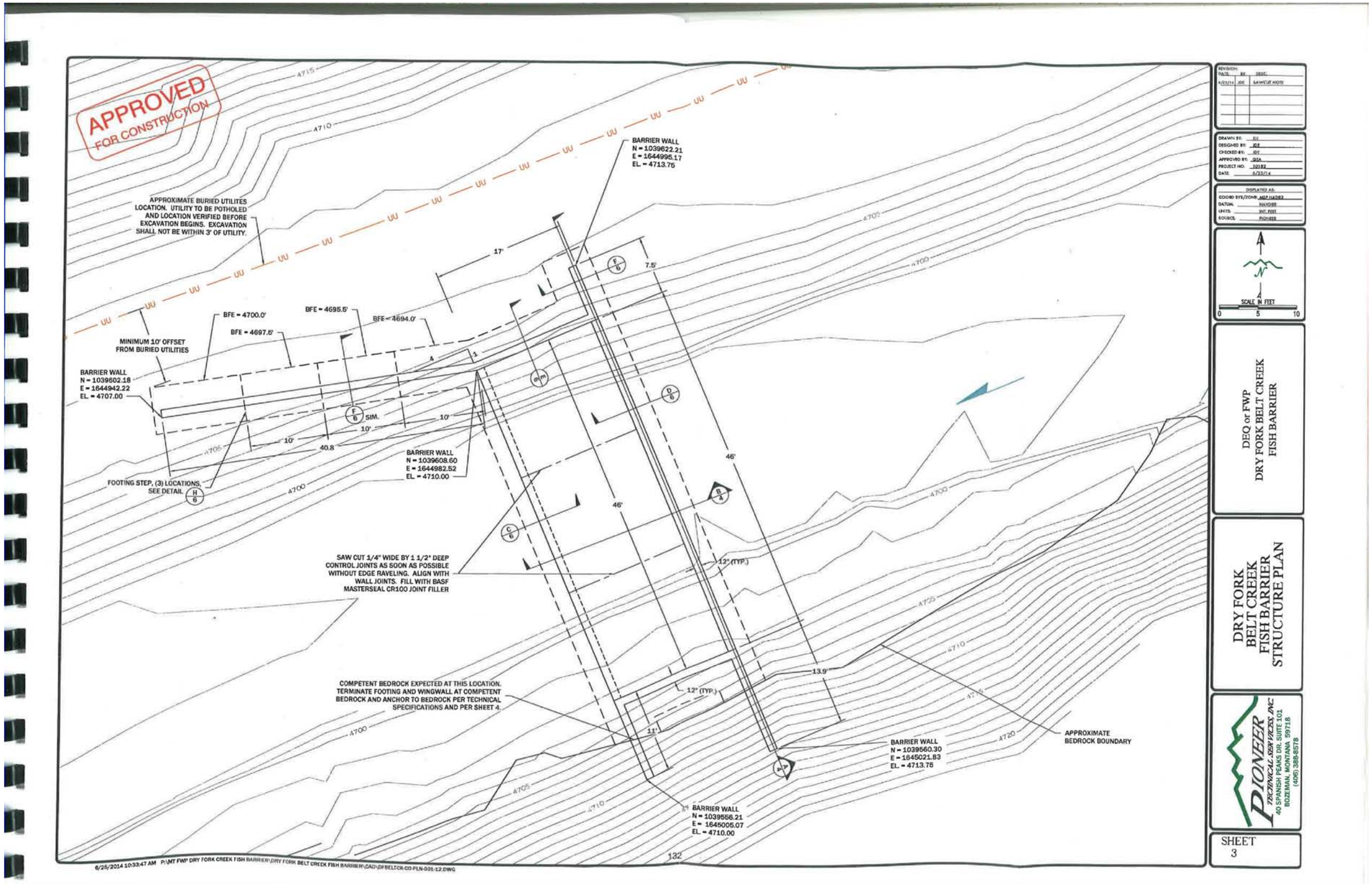

Figure 4. Dry Fork Belt Creek barrier design.

WORK ITEMS (ITEMIZE BY CATEGORY)	NUMBER OF UNITS	UNIT DESCRIPTION*	COST/UNIT	TOTAL COST	CONTRIBUTIONS			
					FFIP Request includes $10,000 from 2012	IN-KIND SERVICES	IN-KIND CASH	TOTAL
Personnel								
Survey		Included in Design		$ -				$ -
Design & Engineering	1	Contracted	LS	$ 18,200.00			18,200.00	$ 18,200.00
Construction	1	Contracted	LS	$ 122,000.00	50,000.00		170,000.00	$ 220,000.00
Oversight	1	Contracted	LS	$ 14,000.00			14,000.00	$ 14,000.00
Labor				$ -				$ -
				$ -				$ -
Travel								
Mileage				$ -				$ -
Per diem				$ -				$ -
Construction Materials								
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Equipment								
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Mobilization								
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			TOTALS	$ 154,200.00	$ 50,000.00	$ -	$ 202,200.00	$ 252,200.00

*Units = feet, hours, inches, lump sum, etc.

MATCHING CONTRIBUTIONS

CONTRIBUTOR	IN-KIND SERVICE	IN-KIND CASH	TOTAL
EPA/DEQ	$ -	$ 18,200.00	$ 18,200.00
PPL previously awarded (now Northwestern Energy)	$ -	$ 14,000.00	$ 14,000.00
Northwestern Energy to be requested	$ -	$ 60,000.00	$ 60,000.00
Reclamation and Development Grants Program	$ -	$ 110,000.00	$ 110,000.00
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -